

The Route 288 Corridor Plan

Adopted By The Chesterfield County
Board of Supervisors
May 25, 1999

Amended March 15, 2000

This amendment reduces recommended densities for residential development that generally drains to Swift Creek Reservoir.

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EXECUTIVE SUMMARY

The newest gateway into Chesterfield County, the Route 288 Corridor, will provide unmatched economic development potential for northwestern Chesterfield. Currently, this area mainly contains agricultural uses and vacant land. Over the next several years, with effective planning and the support of local property owners and citizens, this area can become one of the region's premier office and light industrial employment centers.

Important Issues addressed in the Route 288 Corridor planning effort include:

- Recognizing the key strategic location of the Route 288 Corridor for future economic development in northwestern Chesterfield County.
- Updating the County's Thoroughfare Plan to reflect the road network necessary to serve future development in this area.
- Maintaining the health of the Upper Swift Creek Reservoir as a drinking water source for County residents.
- Attracting high quality economic development proposals to the area.
- Providing adequate public facilities to address the impact of new development.

Key Findings include:

- **Vacant Land:** The area is largely undeveloped and zoned for agriculture at this time, with only three subdivisions and a few other residences scattered throughout the study area.
- **Potential for Change:** With the construction of Route 288, the area will see tremendous change over the next several years, from development of infrastructure to the development of new office parks and light industrial uses.
- **Swift Creek Reservoir:** A model developed by a member of the County's Watershed Committee found that existing and projected land uses in the watershed would result in an in-lake phosphorous concentration of .0493 milligrams/liter (mg/l). A consultant-conducted study found that the land use modifications anticipated by this Plan would result in an in-lake phosphorous concentration of .0501 mg/l, a 1.5 percent increase over the concentration predicted by the original watershed committee model. While both the original model and the consultant's study evaluated the impact of several land use scenarios on phosphorus concentrations in the Reservoir, the values reported in this discussion refer only to average lot sizes of one half acre. This residential density was used because it is considered to be the most likely to be implemented.
- **Public Facilities:** There are limited public facilities and utilities in the area. As development occurs, public utilities will have to be constructed by the developers.
- **Historic Resources:** There are four (4) historic resources in the study area; only one (1) of them, Hallsborough Tavern, is designated as a County historic landmark. All four (4) are in good condition.
- **Emerging Opportunities:** This area, due to its proximity to an excellent transportation network, regional employment centers and a well educated work force, is poised to become another regional employment center.

Major Recommendations of The Plan:

- Provide land uses that **maximize economic development** opportunities in the area for the future of the County and the region.
- Adopt standards to **increase the quality of development** required in this area.
- Promote ongoing efforts to **protect water quality** in the Upper Swift Creek Reservoir and its tributary streams.
- Adopt an ordinance that will require new development to **utilize public water and sewer**.
- **Create a historic area** around Hallsborough Tavern and Bethel Baptist Church that will protect these structures for the future.

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INTRODUCTION

The Route 288 Corridor Plan area (as shown on Map A), located in northwest Chesterfield County, is an area that is currently used primarily for agriculture, large lot residences or vacant land. With the construction of Route 288, many changes will occur in the area. Route 288 will bring regional access, connecting western Chesterfield with Powhatan, Goochland and Henrico and providing opportunities for the entire County.

Route 288's importance to the region is vital. The limited access highway will connect to Powhite Parkway, extend through Chesterfield, with new interchanges at Lucks Lane/Center Pointe Parkway, Woolridge Road Extended and Midlothian Turnpike. It will go through Powhatan County, cross the James River, connecting with the West Creek development in Goochland County and Interstate 64. Chesterfield County residents and businesses will then have direct access to Goochland and western Henrico County. This access will provide additional opportunities for economic development in the Route 288 Corridor area that were not present previously.

Development that occurs as a result of Route 288 must be guided to ensure that full advantage is taken of this unique opportunity for Chesterfield. This area is an important part of Chesterfield County's economic future. This Plan seeks to maximize the opportunities presented by the construction of Route 288, providing a guide for positive development of the area.

How This Plan Works

The Route 288 Corridor Plan, once adopted by the Board of Supervisors, will become part of The Plan for Chesterfield, the County's comprehensive plan. The Plan for Chesterfield is used by County citizens, staff, the Planning Commission and Board of Supervisors as a guide for future decisions in the County, including, but not limited to, decisions regarding future land use, road networks and rezonings. Once The Route 288 Corridor Plan is adopted, it will replace parts of The Upper Swift Creek Plan (1991) and The Midlothian Community Plan (1989). The adoption of The Route 288 Corridor Plan will not, however, change any of the current ordinance requirements adopted to protect water quality in the Upper Swift Creek watershed. The Route 288 Corridor Plan makes no recommendations to change land uses in The Midlothian Community Plan, but there are proposed amendments to the County's Thoroughfare Plan within The Midlothian Community Plan area that are recommended.

A Plan for Action

The following main components are found in The Route 288 Corridor Plan:

- **Existing Conditions and Important Issues:** This information forms the factual basis for the goals, recommendations and implementation strategies found in the Plan.
- **Emerging Opportunities:** This section highlights changes that will be brought by Route 288 and the opportunities that are associated with its construction.
- **Goals:** These are general statements about what is desirable for the future - what the Plan attempts to accomplish.
- **Recommendations:** These are statements on ways to reach the goals and what actions should be taken to achieve them.
- **The Land Use and Transportation Plan:** The Plan will be used as a guide for future development decisions.

(Map A)

Rt. 288 Corridor Plan Base Map



THE CITIZEN PARTICIPATION PROCESS

The Importance of Citizen Participation

In order for any plan to stand the test of time, citizens must support it. Citizen support for a plan and its concepts is built through a process of citizen involvement where citizens' viewpoints, questions and concerns are considered and taken into account. This Plan seeks to build upon the interests of citizens in the County, present and future.

Public Involvement

To respond to the high level of citizen and community interest in this Plan, numerous meetings were held with citizens, community groups, property owners and individuals. A mailing list was maintained of all property owners in the area, as well as anyone who requested information about the Plan or attended any meetings about the Plan.

At two (2) informational meetings held in Summer 1997, approximately 180 citizens attended to find out more about the planning process and the study area. Over the course of the next ten (10) months, approximately twenty (20) smaller meetings were held with interested citizens to keep them informed about the planning process. In June 1998, the concepts of the Plan were reviewed with citizens for their input at four (4) public meetings, with a total attendance of approximately 200 people.

Citizens shared ideas with staff throughout the planning process and offered staff suggestions to make this Plan one that will be successful in the future. *The Route 288 Corridor Plan's* successful implementation will be a joint effort by the County and community.

EXISTING CONDITIONS AND IMPORTANT ISSUES

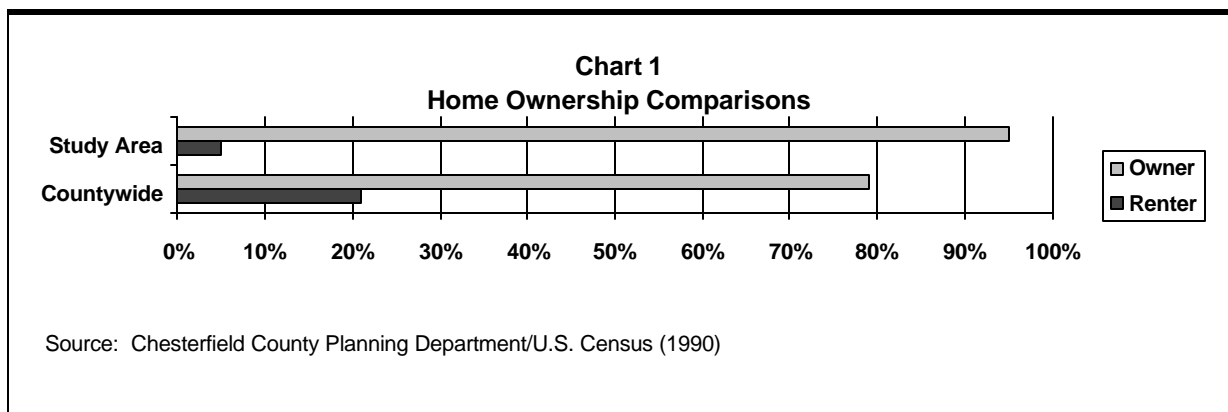
Extensive analysis of existing conditions in the Route 288 Corridor planning area, including valuable information generated through the citizen participation process, forms the foundation for identifying key planning issues and factors. Information about the Route 288 Corridor was gathered from many sources, including field surveys and County records. An understanding of the characteristics and trends that influence development potential in the area provides a sound basis for planning and policy decisions that will shape the Route 288 Corridor's future. Key findings from the research include:

- The majority of the land in the planning area is currently vacant or held in large agricultural or residential parcels;
- Numerous proposed large scale development projects are zoned in or near the planning area that could have a significant effect on future growth and traffic patterns;
- The area has important environmental features, including the Upper Swift Creek Reservoir watershed, streams and wetlands.

Demographic and Economic Information

Demographic and economic information was obtained from 1990 U. S. Census data. The data was updated where possible by using field surveys conducted by the Chesterfield County Planning Department to determine the number and type of houses in the area. Estimates of population were then based on the observed number of houses multiplied by the number of persons per household in 1990.

- **Population:** The population of the planning area in 1997 was approximately 1,040 people, .4 percent of the 1997 Planning Department's County-wide estimate of 250,000.
- **Income and Unemployment:** 1990 Census data shows unemployment in the planning area was 2 percent, below the County-wide figure of 3.3 percent. The estimated 1990 median household income of the planning area was \$66,535, above Chesterfield's \$43,604. The poverty level was 2.7 percent compared to the County's 6 percent.



- **Community:** The community is very stable as the area is rural and has seen slow growth. Chart 1 shows that 96 percent of the planning area's residences are owner-occupied.

Land Use

The Route 288 Corridor planning area consists mostly of agricultural uses and vacant land. Land use data was gathered from an existing database of County real estate tax records and field surveys. There are 526

parcels in the planning area. The combined area of those parcels is approximately 6,943 acres; 2.4 percent of Chesterfield County's 285,702 total acres.

- Large Tracts:** There are thirty-three (33) parcels that each exceed fifty (50) acres, and combined account for about 5,022 acres or 72 percent of the planning area's acreage. Approximately 67 percent of these parcels are zoned for agriculture and approximately 72 percent are currently vacant or used for agriculture. These tracts are located throughout the area and present opportunities for future large scale development projects.
- Existing Zoning:** The zoning of property determines the uses that are allowed on that land. For example, property that is zoned for residential land uses will have a zoning category that begins with R. The number following the R represents the required lot size for the category (R-7 requires a minimum 7,000 square foot lot, R-9 requires a minimum 9,000 square foot lot and so on). Agricultural (A) zoning allows large lot residential uses and farm uses. It may also be the zoning category for land that has not yet been zoned to another category for development. Table 1 shows a breakdown of zoning categories for the Route 288 planning area. As shown in the table, the majority of the land in the planning area is currently zoned A. The few office and commercially zoned areas are primarily located along Midlothian Turnpike with a concentration just before the Powhatan County line. Most of the industrial zoning is in the Sommerville development located on Midlothian Turnpike.

Table 1 Zoning Analysis Percentages given are rounded.		
Zoning	Acres	Pct.
A (Agricultural)	4,900	71%
R-7 (Residential)	481	7%
R-9	921	13%
R-15	177	3%
R-25	33	0%
O-2 (Office)	149	2%
C-2 (Commercial)	3	0%
C-3	75	1%
I-1 (Light Industry)	204	3%
Rt. 288 Study Area	6,943	100%

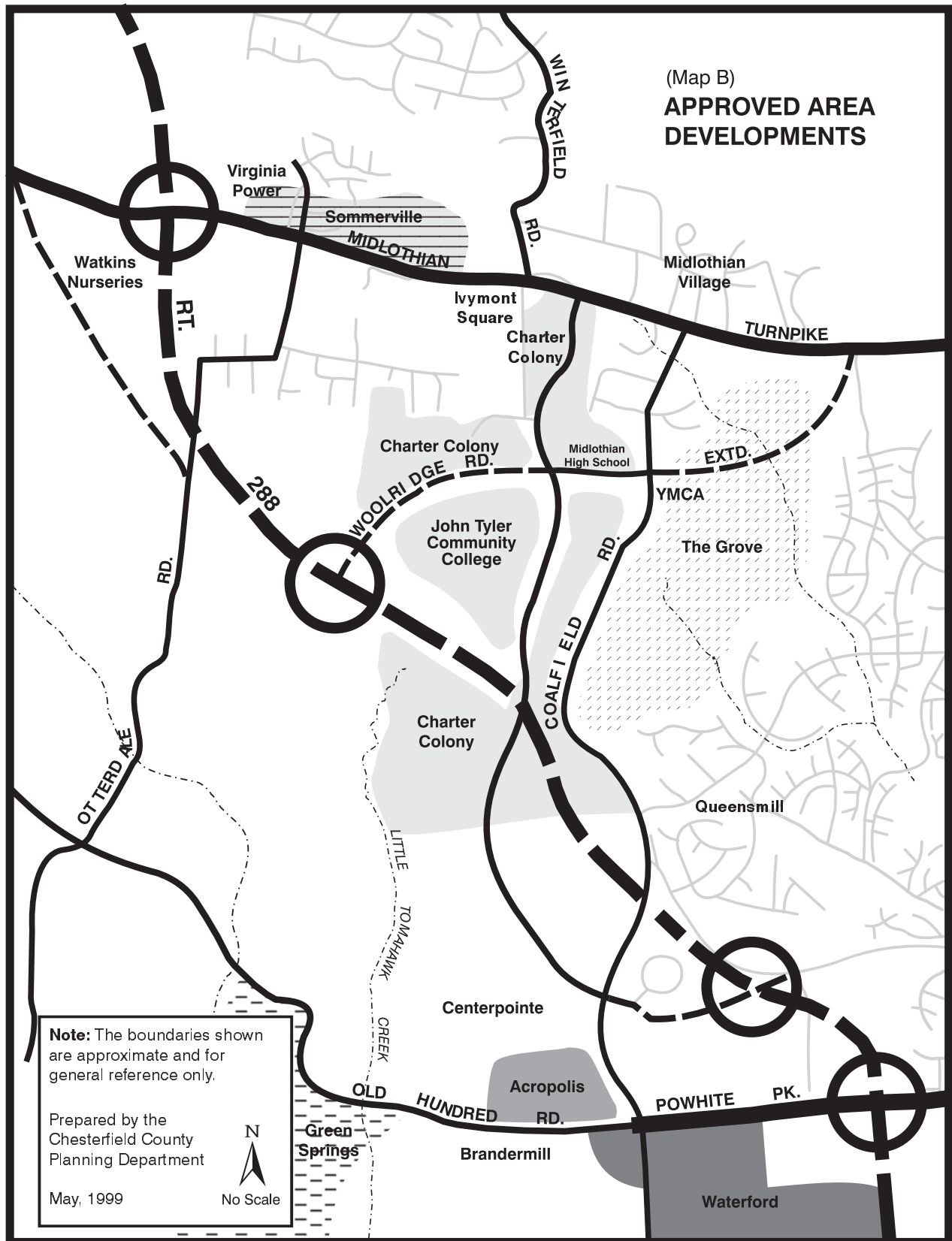
Source: Chesterfield County Planning Department

Table 2 Approved Future/Adjacent Developments			
Because most of the existing zoning in this area was zoned through a Conditional Use Planned Development, specific uses allowed may not be reflected through the underlying zoning category.			
Name	Acreage	Zoning and Acreage per Category	Comment
Acropolis	69	O-2	Mixed -Use development allowing office and commercial uses.
CenterPointe	947	R-7 (330.7), R-15 (18.8), R-MF/TH (91), C-3 (41), O-2 (400)	Mixed-Use development allowing residential, office and commercial uses.
Charter Colony	822	R-9 (770.5), R-15 (115.9) C-3 (3.6)	Mixed-Use development allowing residential, office, and commercial uses. This development also includes the Midlothian campus of John Tyler Community College.
Greensprings	1,313	R-9 (1044.7), O-2 (268)	Mixed-Use development allowing residential, office and commercial uses.
The Grove	440	R-9 (102.5), R-12 (132.8), R-TH (60.1), R-MF (21.3), O-2 (16.6), C-3 (56.7)	Mixed-Use development allowing residential, office, commercial, outdoor recreational, and public/semi-public uses.
Sommerville	140	I-1	Mixed-Use development allowing residential, office, light industrial and commercial uses.
Waterford	243	I-1 (190.5), R-MF (31), C-1 (21.5)	Mixed-Use development allowing office, light industrial, and limited commercial uses.

Source: Chesterfield County Planning Department

- Approved Area Developments:** There are seven (7) major approved developments in, or immediately adjacent to, the planning area and near the proposed extension of Route 288 (see Map B). These seven

(Map B)
**APPROVED AREA
DEVELOPMENTS**



(7) developments are Acropolis, CenterPointe, Charter Colony, Greensprings, The Grove, Sommerville and Waterford. All of these projects have seen limited development or have not begun to develop.

Land Use Analysis

This land use analysis reviewed the existing use of property in the Route 288 planning area in 1998 (see Map C). It does not analyze what the land is zoned or what the property is designated for in the future.

- **Undeveloped and Agricultural Land:** This category includes vacant land and agricultural uses as well as residential uses on parcels ten (10) acres or greater. It accounts for 200 parcels and 6,285 acres, approximately 90 percent of the total acreage in the planning area. These parcels vary in size and are located throughout the planning area. Most of the land is zoned for agricultural or residential uses.

Table 3 Existing Land Use Percentages given are rounded.		
Land Use	Acres	Percentage
Undeveloped and Agricultural	6,285	90%
Residential	445	6%
Commercial	107	2%
Industrial/Office	81	1%
Public/Semi-Public	24	1%
Total	6,943	100%

Source: Chesterfield County Planning Department

- **Residential:** This includes all parcels currently used for homes on less than ten (10) acres. Residential land uses comprise 445 acres (6.4 percent) of the planning area. Approximately one-third of the residences are scattered on agriculturally zoned parcels of less than ten (10) acres in size. The remaining are in residential neighborhoods. Currently there are three (3) neighborhoods in the area: Huguenot Ridge, located on Huguenot Springs Road; Buckingham Manor, on Otterdale Road; and Otterdale, also on Otterdale Road. Huguenot Ridge has thirty (30) approved lots, six (6) of which have been developed. Buckingham Manor has developed thirteen (13) of its eighteen (18) approved lots, while Otterdale Subdivision has developed 137 of its 140 approved lots.
- **Commercial:** Commercial uses account for approximately 1.5 percent of the planning area's land use (107 acres). These uses are located along Midlothian Turnpike. The primary commercial uses are Watkins Nursery and Windy Hill Sports Complex. Watkins Nursery grows and sells plants for landscaping purposes and plans to relocate before the construction of Route 288. Windy Hill Sports Complex is on the west-bound side of Midlothian Turnpike just past Huguenot Springs Road. The complex has batting cages, miniature golf, a driving range and has recently added a nine-hole golf course.
- **Industrial:** Industrial and office land uses account for 1.2 percent or eighty-one (81) acres of the planning area's uses. These uses include the Sommerville Industrial and Office Park and a Virginia Power substation on Dry Bridge Road, one-half mile south of Midlothian Turnpike. It has several high voltage transmission wires leading to it through several properties.
- **Public/Semi Public:** See Public Facilities on page RT 7.

Environmental Factors

In guiding future land use decisions in the planning area, environmental features should be considered.

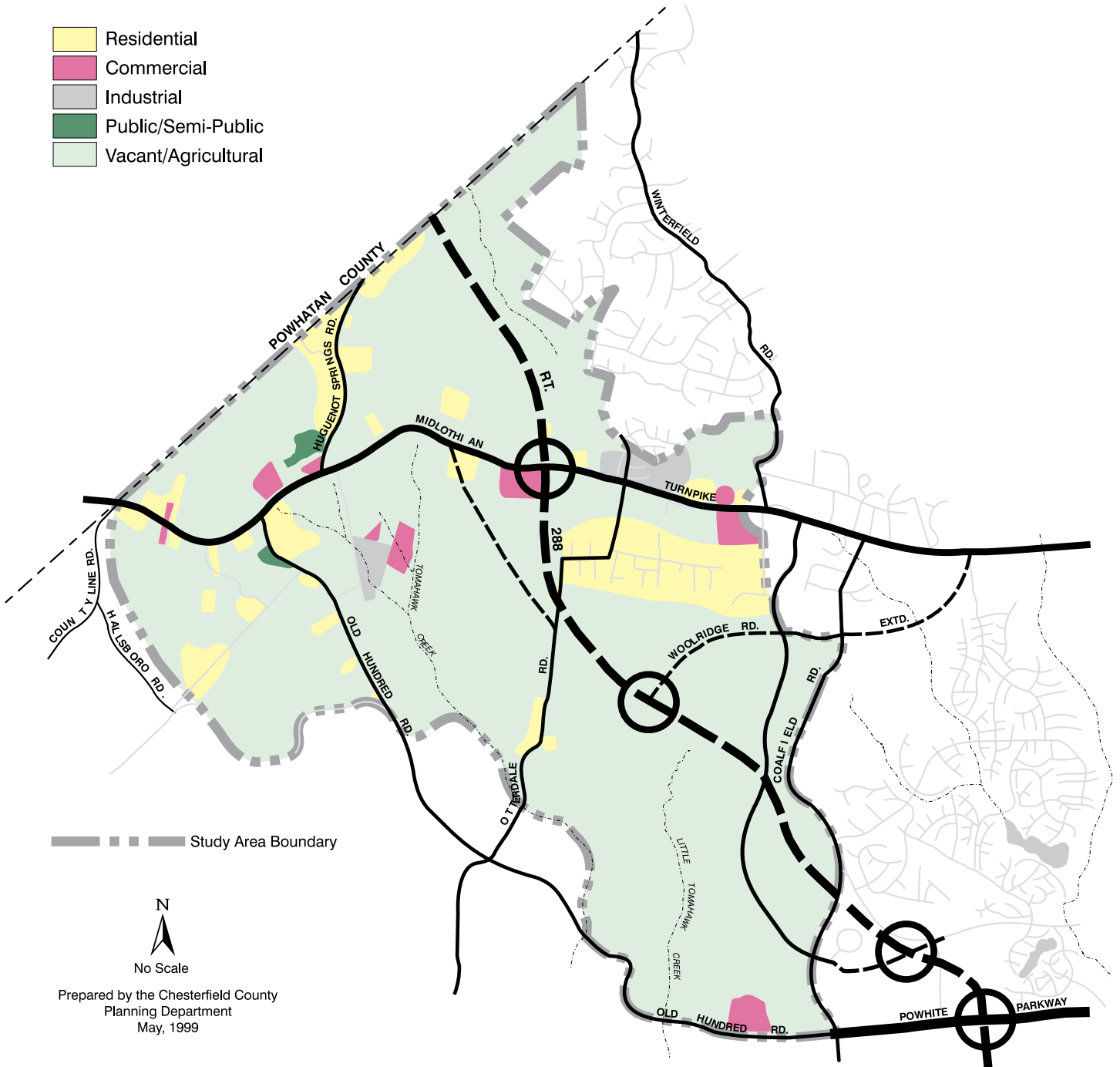
- **Swift Creek Reservoir Watershed:** The portion of the planning area south of Midlothian Turnpike is located in this 41,950 acre watershed and contains two (2) of the nine (9) major tributaries that drain to the Swift Creek Reservoir. Located west of Route 288 between Route 360 and Genito Road, the Swift Creek Reservoir covers 1,700 acres. One of Chesterfield County's three (3) principal water sources, it produces approximately eight (8) million gallons of drinking water per day for 30 percent of County citizens. The Reservoir also functions as a recreational and aesthetic resource for residents of surrounding areas. At this time, the Reservoir's overall water quality is good. However, only a small

(Map C)

Rt. 288 Corridor Plan

Existing Land Use

- Residential
- Commercial
- Industrial
- Public/Semi-Public
- Vacant/Agricultural



portion of the Reservoir's watershed, approximately 12 percent, is developed. The remainder of the large watershed area has been recommended by County plans for significant future growth. Without adequate management, such growth could result in the generation of large amounts of nutrients and pollutants on the Reservoir. These could cause taste and odor problems in the treated water, excessive algae blooms and depleted oxygen levels, affecting fish and other aquatic organisms, the aesthetic value of the Reservoir and its viability as a drinking water supply. Further, nutrients and pollution in the Reservoir may have an economic impact as well. As water quality decreases, the cost of treatment can increase. To address all of these concerns, in 1997, the Board of Supervisors adopted a Watershed Management Plan for the area. The Watershed Management Plan includes an in-lake phosphorous limit and establishes measures such as a reduced phosphorous standard for new residential development and the construction of regional Best Management Practice(BMP) basins to filter pollutants to meet this limit.



- **Watershed Standards and The Route 288 Corridor Plan:** Early in the planning process, citizens expressed concern about the continued health of the Upper Swift Creek Reservoir. Their concerns focused on higher intensity uses that may be allowed as a result of this Plan. In order to respond effectively to these concerns, the Environmental Engineering Department contracted with a consultant to update the land uses in the water quality model used by the County and the County's Watershed Management Committee to reflect the recommended land uses in The Route 288 Corridor Plan. The results of this modeling showed that the land use modifications anticipated by this Plan would result in an in-lake phosphorous concentration of .0501 milligrams/liter, a 1.5% increase over the concentration predicted by the original watershed committee model. While both the original model and the consultant's study evaluated the impact of several land use scenarios on phosphorus concentrations in the Reservoir, the values reported in this discussion refer only to average lot sizes of one half acre. This residential density was used because it is considered to be the most likely to be implemented.
- **Tributary Streams:** The Swift Creek Reservoir Watershed contains nine (9) tributary streams that lead to the Reservoir. Two (2) of these, Tomahawk Creek and Little Tomahawk Creek, drain to the Route 288 Corridor planning area. Tributary streams are important to the health of the reservoir because they can convey pollutants to the Reservoir. Further, the streams are also important environmental resources. The direct benefits of the streams include providing wildlife habitat and aesthetic value to an area. Stream water quality can be adversely affected as a result of sediment, metals and bacteria running off parking lots and other paved surfaces. In particular, the high levels of imperviousness (surfaces which do not absorb water) typically associated with commercial and high density residential growth can adversely affect streams by increasing the volume of water draining to them. This can result in a number of impacts, including stream bank erosion and sedimentation, resulting in negative impacts on aquatic organisms in the streams and affect aesthetics as well. Where appropriate, stream buffers can provide protection of wetland and floodplain areas which, in turn, serves to control both the quantity and quality of stormwater runoff.
- **Topography and Soils:** The topography of the planning area consists principally of flatlands and rolling hills typical of the Piedmont physiographic region. Soils in the planning area can be characterized as moderately to well drained. There are some areas, however, that are characterized by clayey or hydric soils, which do not drain well.
- **Existing Regulations to Protect the Reservoir:** The Chesapeake Bay Preservation Act, Upper Swift Creek, Floodplain and Erosion and Sediment Control Ordinances are the regulations that limit the amount of pollutants entering the Reservoir from both non-residential and residential growth. As a means of further reducing the amount of pollutants, the recently adopted Watershed Management Plan for the

watershed establishes a stringent phosphorus standard for new development and recommends the installation of a series of regional retention basins to filter a significant portion of the pollutants in stormwater runoff from developed land.

- **Existing Regulations to Protect Streams:** The two (2) measures to protect the streams are the County's Erosion and Sediment Control and Chesapeake Bay Preservation Act Ordinances. The first Ordinance limits the amount of sediment that is allowed to enter a stream during construction activities. The second Ordinance establishes Resource Protection Areas (RPAs) adjacent to perennial streams. The establishment of RPAs is intended to ensure an adequate buffer between environmental resources (such as wetlands and streams) and development. RPAs reduce and filter the pollutants in stormwater runoff. The RPA boundaries in the watershed were established by delineating an area measured from the limits of the 100 year floodplain where available or from the edge of hydric soils. As it is currently written, the Chesapeake Bay Preservation Act Ordinance allows these RPA areas to be reduced by permitting the area to be "redelineated" by measuring the area from field-delineated wetlands rather than the floodplain. In most cases, these redelineations result in a reduction in the RPA, thus affording less protection for the streams. Further, 100 year floodplain areas adjacent to non-perennial streams can be cleared.

Public Facilities

- **Facilities:** There are no parks, schools, fire or rescue stations currently located in the planning area boundaries. However, the County's 1995 Public Facilities Plan recommends construction of an elementary school in the southeastern part of the planning area by the year 2015. A community park and a fire station are also planned within the planning area.
- **John Tyler Community College:** John Tyler Community College-Northern Branch will be located in the southwestern quadrant of the intersection of Charter Colony Parkway and Woolridge Road Extended.

Public Water/Wastewater Systems

- **Existing Water and Wastewater Systems:** The use of public water and wastewater systems is currently recommended for all development within The Upper Swift Creek Plan. Provisions of the County Code and conditions of zoning, tentative subdivision and/or site plan approval may require the use of public systems. Due to the variability of construction costs and other factors, specific water and wastewater line extensions needed for future development should be discussed far in advance with the Utilities Department. Information relating to water and wastewater infrastructure may be found in The Water and Wastewater Facilities Plan.



The planning area is served by several large water mains, a twenty-four (24) inch line along Midlothian Turnpike (Route 60) and a twenty-four (24) inch line along Coalfield Road. The area is also served by an existing water tank at Huguenot Springs Road. That portion of the planning area located south of Midlothian Turnpike is served by a sixty (60) inch wastewater trunk along Genito Road, the Upper Swift Creek wastewater pumping station and the Bailey's Bridge pumping station. An eighteen (18) to twenty-seven (27) inch wastewater trunk along Little Tomahawk Creek has been extended to serve the John Tyler Community College-Northern Campus and adjacent properties. That portion of the planning area located north of Midlothian Turnpike is served by a twenty-one (21) to thirty (30) inch wastewater

trunk along Michaux Creek and by the Michaux Creek wastewater pumping station. These two (2) facilities are supported by a thirty/thirty-six (30/36) inch wastewater trunk located along the James River. That area of the Plan bordered by Midlothian Turnpike, Huguenot Springs Road and the Chesterfield/Powhatan County line cannot be served by a direct gravity line extension from the Michaux Creek system. The topography of this area dictates that it naturally drains west toward Powhatan County and would require the construction of a small pumping station to access the public wastewater system. Existing facilities are sized to provide capacity consistent with those land uses reflected in the Plan. Should more intense land uses be pursued which would be considered heavy water users and wastewater generators, detailed analyses may be necessary to address impact on the existing public water and wastewater systems.

- **Future Water and Wastewater Systems** The County's long-standing policy **Growth Pays For Growth,** as reflected in the County's Upper Swift Creek Plan is applicable in the Route 288 Corridor planning area as well. Unless the construction of a new facility is undertaken by the County (including upgrading of pumping stations and construction of water tanks) to address system reliability or water quality concerns, the majority of future water and wastewater facilities depicted on the County's Water and Wastewater Facilities Plan are anticipated to be constructed by private development interests. Current County policies may provide some rebating of construction costs to developers for off-site extensions and line over-sizing.

Development within the planning area will require the extension of major water mains as well as smaller lines to serve specific sites. Major lines proposed include sixteen (16) inch and twenty-four (24) inch lines along Otterdale Road, north and south of Old Hundred Road, along Old Hundred Road, east and west of Otterdale Road, a twenty (20) inch line along Mt. Hermon Road and a twelve/twenty (12 /20) inch line between Robious Road and Midlothian Turnpike. A water tank, to be located in the vicinity of DuVal Road, should provide additional system support for the planning area.

The extension of major wastewater trunks, as well as sub-trunks, and collector lines will be required for development within the planning area. Major trunks proposed include an eighteen (18) inch to twenty-seven (27) inch trunk along Tomahawk Creek and an eighteen (18) inch to thirty-six (36) inch trunk along Swift Creek. These trunk extensions will begin at the existing sixty (60) inch trunk along Genito Road and will require smaller extensions along several upstream tributaries. Sub-trunk extensions from the Little Tomahawk and Michaux Creek trunks will be necessary to serve specific development sites. Upgrading or expansion of the Michaux Creek, Upper Swift Creek and Bailey's Bridge wastewater pumping stations will eventually be necessary as development occurs within the planning area and within The Upper Swift Creek Plan area. The proposed new and expanded facilities are sized to meet the capacity requirements anticipated by those land uses reflected in the Plan. However, should more intense uses be pursued which would require much higher water demands and generate much higher levels of wastewater flows, detailed analyses may be necessary to address system capacity issues. These analyses would need to address the ability of current water sources and treatment plant sites to meet these potential higher demands and flows.

Transportation

Existing Conditions: Much of the Route 288 Corridor is served by two-lane roads, such as Huguenot Springs Road, Otterdale Road, Old Hundred Road and Coalfield Road. Charter Colony Parkway, a new two-lane facility, was recently completed from the vicinity of Midlothian High School south to Coalfield Road. Midlothian Turnpike (Route 60) is the major East/West road in the Corridor and is a four-lane highway with a median. Traffic signals are located at its intersections with Old Hundred Road and Otterdale Road. The following are average daily traffic volumes on some of the major roads



in the corridor:

Midlothian Turnpike, west of Winterfield Road	23,465	(1997)
Charter Colony Parkway, south of Midlothian High School	2,615	(1997)
Coalfield Road between Queensmill and the YMCA	15,370	(1997)
Huguenot Springs Road	1,160	(1996)
Mount Hermon Road between Old Hundred and Hallsboro Roads	340	(1996)
Old Hundred Road between Dry Bridge and Otterdale Roads	4,260	(1997)
Otterdale Road between Midlothian Turnpike and Otterdale Road	2,150	(1997)

Coalfield Road, which originates in the Village of Midlothian and is the primary north/south traffic carrying facility in the Corridor, is the only road that is currently operating at capacity. A Norfolk Southern rail-line runs east and west through the Corridor, south of and parallel to Midlothian Turnpike.

According to the Virginia Department of Transportation's (VDOT's) Rail and Public Transportation section, this line carries two (2) trains per day.

The design of Route 288 from the Powhite Parkway through the Corridor to the northern County line has been completed. Ultimately, Route 288 in the Corridor area will be a four (4) lane, interstate-style limited access facility with interchanges located at Lucks Lane/Centre Pointe Parkway, Woolridge Road Extended and Midlothian Turnpike. Collector/Distributor (C/D) roads will be provided throughout most of the Corridor. These C/D roads will run parallel to the mainline lanes and will allow vehicles entering and exiting Route 288 to do so without interfering with mainline traffic. The initial phases of construction will result in a four (4) lane facility between Powhite Parkway and Midlothian Turnpike and a two (2) lane facility north of Midlothian Turnpike.

Right-of-way acquisition is currently underway. First phase construction of the section between the Powhite Parkway and Midlothian Turnpike is scheduled to begin in the Fall of 1998. First phase construction of the section north of Midlothian Turnpike is scheduled for the Spring of 2000.

In 1989, the Board of Supervisors adopted a County-wide Thoroughfare Plan. Changes to the 1989 Thoroughfare Plan will be necessary due to the Route 288 project and approved development in the area.

- **Other Road Projects In The Route 288 Corridor Area:** In addition to Route 288, the following are other road projects in or adjacent to the Route 288 Corridor:
 1. Old Hundred Road - Between Dry Bridge Road and Otterdale Road, Old Hundred Road has narrow travel lanes and inadequate shoulders. This project will reconstruct two (2) lanes to provide adequate travel lane and shoulder widths and will improve vertical and horizontal alignments where necessary. Although this project is in the current Six Year Construction Plan, construction funds have not been allocated.
 2. Woolridge Road Extended - A short section of Woolridge Road Extended has been completed connecting Charter Colony Parkway, south of Midlothian High School, with Coalfield Road at the YMCA. A further extension of Woolridge Road will connect Coalfield Road at the YMCA with Midlothian Turnpike, east of the Village of Midlothian, at the existing intersection of Midlothian Turnpike with Walton Park Road and Old Buckingham Road. When completed, this road will provide a southern Midlothian bypass and should divert a significant volume of traffic from the section of Midlothian Turnpike that passes through the Village of Midlothian. Construction is underway and should be completed by Fall 1999.
 3. Charter Colony Parkway - To improve access to Midlothian High School and the future John Tyler Community College campus, westbound dual left-turn lanes and a traffic signal will be installed at the Midlothian Turnpike/Charter Colony Parkway intersection. Additional lanes will be constructed on Charter Colony Parkway, south of Midlothian Turnpike and across the frontage of Midlothian High School, to provide left-turn lanes at school entrances. Construction of this project is anticipated to begin in 1998.

Historic Resources

This area of Chesterfield County has many significant historical structures (see Map D). Most are still in use today and have been well preserved. Information on historic resources was taken from Jeffrey O'Dell's 1983 book, *Chesterfield County: Early Architecture and Historic Sites*. The following list of historic sites includes all of those inventoried in the book which are still existing in the planning area. All of these structures are located near Midlothian Turnpike and are part of what was a small hamlet which centered around Hallsborough Tavern.

- **Bethel Baptist Church** (100 Huguenot Springs Road): This structure was erected in 1894 behind Hallsborough Tavern and is the only nineteenth century brick church in Chesterfield County. The building is a Gothic Revival structure with a steep, gable roof sheathed in slate.



- **Chapel Hill** (194 Huguenot Springs Road): Built in 1903 by Dr. W. D. Sydnor, this house is a central passage plan I-house featuring a front-cross gable, interior end brick chimneys and octagonal-roofed turrets.

- **Hallsborough Tavern** (16300 Midlothian Turnpike): This structure was originally built by James Howard around 1810 to serve as a tavern and retail store. The next owner, Austin Spears, added a two story wing in 1832 to accommodate guests. This structure eventually served as the area's post office. This building has been altered several times since its original construction. Currently, it is being used for retail purposes.



- **Mount Sinai Baptist Church** (200 Old Hundred Road): Erected in 1884, this was the first church built to serve the area's African-American community. Construction funds were raised from donations and festivals. The original structure underwent major remodeling in 1948 and again in 1969.

(Map D)

Rt. 288 Corridor Plan

Historic Resources Map

- A** Bethel Baptist Church
- B** Chapel Hill
- C** Hallsboro Tavern
- D** Mt. Sinai Baptist Church & Cemetary



Land Character Types

Based on field surveys, information provided by County Departments, maps of existing land use, the location of significant water bodies and Chesapeake Bay Resource Protection Areas, a character type inventory of the planning area was conducted as a means of classifying land areas (see Map E). Four (4) character types depict the visual environment of the planning area. Below are the character types, their definitions and significance to the area.

- **Forested**

Description: Managed forests and natural wooded areas which include a mix of pine and hardwood.

Significance: Forest land is significant both environmentally and aesthetically. Environmentally, forests protect the soil, produce oxygen, provide opportunities for recreation and play a role in a variety of natural environmental systems. Forested land contributes to the rural and natural “feel” of an area and may buffer different land uses from one another.

- **Agriculture and Open Space**

Description: Cropland, open fields, pastures and recreational areas.

Significance: Agricultural land uses are particularly significant to the visual quality and ambiance of an area because of the seasonal changes and variety. The textures and colors of the open fields are particularly attractive from rural roadways, especially in areas with rolling terrain.

- **Residential**

Description: Subdivisions are a grouping of suburban type housing linked by a planned road network and are marked with an identifiable entrance. Strip residential development consists of homes located along roadways, generally fronting arterials and collectors in a linear configuration.

Significance: Although the planning area remains relatively undeveloped, consisting of only three (3) neighborhoods, growth is expected to occur in the next few years as the completion of Route 288 nears.

- **Office, Commercial and Industrial**

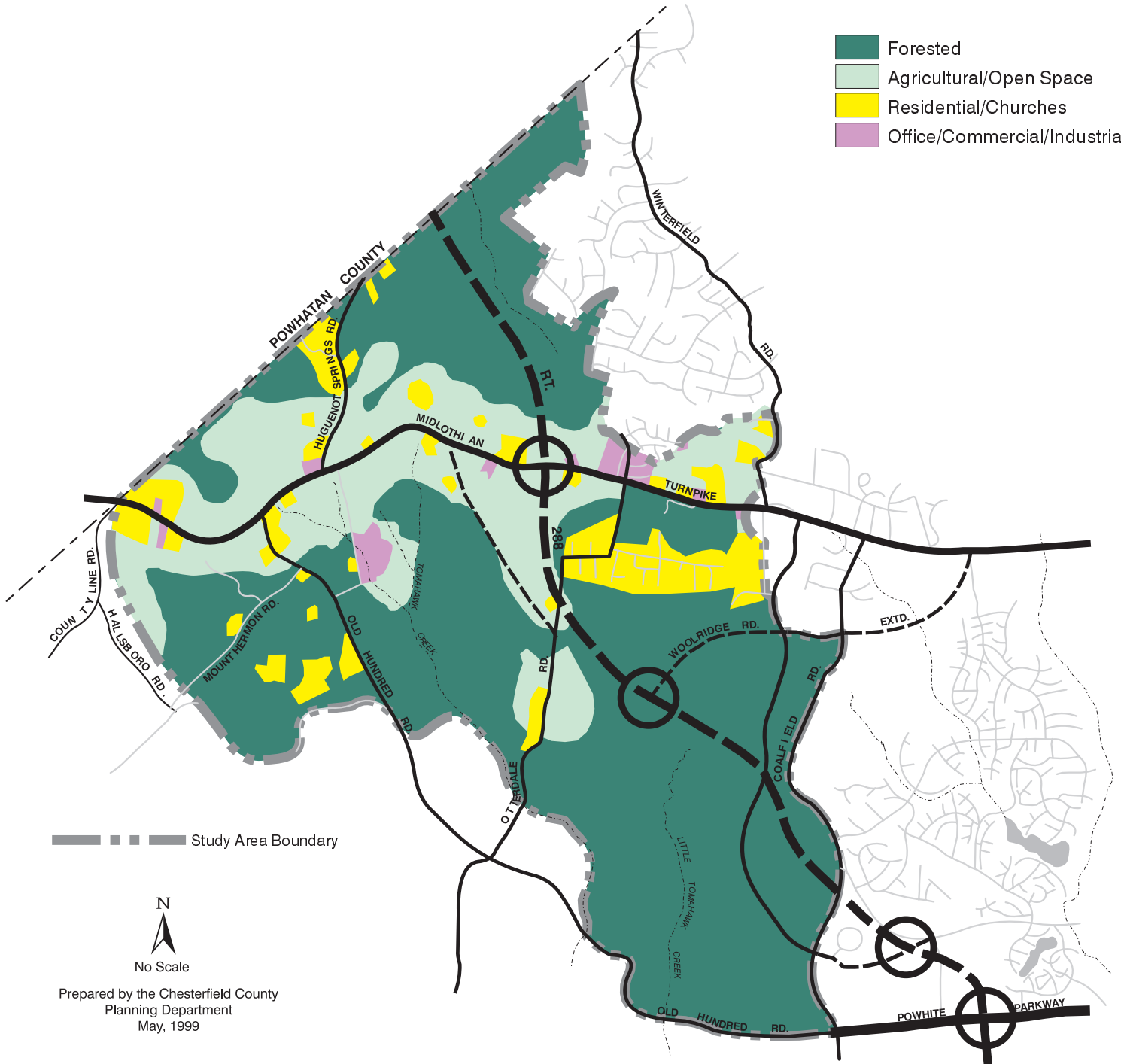
Description: Most of these uses in the planning area, which includes Watkins Nursery, are rural, family-owned businesses or are buffered and blend in with the character of the surrounding area. The exception to this is the Virginia Power substation which is significantly screened from view by forested areas.

Significance: Currently, these uses account for a very small portion of the development in the planning area. However, upon the completion of Route 288 and other transportation improvements, these types of uses are expected to increase and become dominant in the area.

(Map E)

Rt. 288 Corridor Plan Character Type Map

- Forested
- Agricultural/Open Space
- Residential/Churches
- Office/Commercial/Industrial



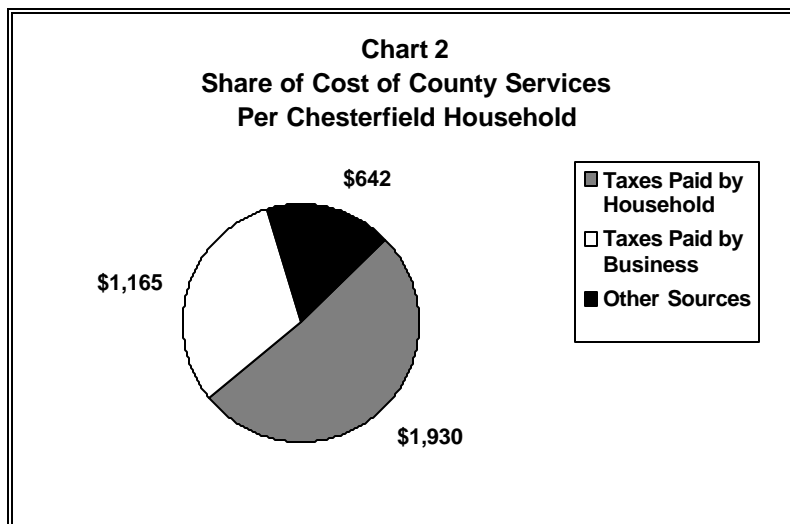
EMERGING OPPORTUNITIES

The completion of Route 288 from the Powhite Parkway to Interstate 64 will greatly accelerate development activity in all of northwest Chesterfield County and throughout the region. Not only will this new highway open up access to a relatively undeveloped part of Chesterfield, it will provide a direct link across the James River to Goochland County's West Creek Business Park, home of the proposed Motorola semiconductor plant and western Henrico's business district.

Effective planning in this area will assure that, as growth occurs, it is properly guided, taking advantage of a prime opportunity for needed economic development, while maintaining environmental preservation and the County's high quality of life.

Chesterfield and The Metropolitan Region's Economy

Chesterfield County has historically been a "bedroom community" for the Richmond metropolitan area, providing a greater proportion of places to live than places to work. This has a large fiscal impact on the County, since the cost of providing services to residential development is greater than what it pays the County in taxes (see Chart 2). Business revenue to the County provides most of the additional funds necessary to provide residential services. Therefore, a balance between economic development and residential growth is important.



Source: Chesterfield County Budget Department

In 1997, the Chesterfield Planning Department analyzed the County's Comprehensive Plan to determine the number of acres that should be recommended for office and industrial use to meet long-range economic goals for the County. This analysis compared the County's existing share of the region's economic base and the amount of land recommended for office and industrial use in the County's adopted Comprehensive Plan. Using a moderate level growth forecast covering the period to 2044, the analysis identified a land use plan deficit of approximately 2,250 acres of land recommended for industry and 4,350 acres of land recommended for office use, totaling 6,600 additional acres necessary, but not yet designated for, office and industrial uses in the County's adopted Plans.

Jobs and Location

Chesterfield needs more businesses to balance residential growth and provide quality jobs for its citizens. Not all jobs are created equal; attracting "basic sector" jobs, like those associated with corporate offices and light industry, will be of greater benefit to the citizens of Chesterfield County. These jobs are higher paying, with better benefits, and generate spin-off employment in other economic sectors, such as retail and service. Quality jobs are especially important in the Route 288 Corridor planning area, as most of Chesterfield's workers live in the northwestern part of the County and most of Chesterfield's major employers are in the eastern part of Chesterfield.

Timing of Development

Typically, the demand for residential construction in highway corridors precedes the market for corporate office and light industrial uses. This area is anticipated to have residential demand due to the development of employment centers at West Creek in Goochland, large employment centers in western Henrico and a scarcity of land designated for residential development in Goochland and Henrico. With the construction of Route 288, Chesterfield County will only be a short commute over the new James River bridge. There may also be interest in retail development along Midlothian Turnpike, as businesses consider the potential of attracting commuters from Route 288. However, commercial development is already developed nearby at Chesterfield Towne Center, with additional space already planned and zoned at the Route 288/360 interchange area and east and west of Midlothian Village.



Planning and Design Issues

The future design and configuration of development in the Route 288 corridor is critical to Chesterfield County. Well-planned and constructed development, consolidated and coordinated to the maximum extent possible, will promote a stronger tax base, an aesthetically pleasing environment and the cost effective provision of County services.

Most quality, large-scale suburban office and light industrial development in the Richmond region is found in “corporate parks,” such as the Arboretum and the Boulders off Midlothian Turnpike in Chesterfield County, Innsbrook in Richmond’s west end and the new West Creek Corporate Park in eastern Goochland County. Common to these developments are basic features that characterize good design and planning including generous landscaping, well designed entrances, use of curbs and gutters along streets, a mix of building heights, effective lighting and parking. Many of these corporate centers have their own strict development standards but, at the same time, incorporate enough flexibility to accommodate market demand. In many cases, a combination of local zoning requirements, improvements proffered by the center’s developer at the time of rezoning and deed covenants established by the developer combine to ensure good design and planning.



Well-designed corporate centers play an important part in the success of attracting desirable economic development in a regionally and nationally competitive environment. Haphazard and incremental commercial development, especially industrial uses characterized by prefabricated metal buildings, inadequate landscaping and outside storage visible from public areas, can be detrimental to attracting new businesses to an area.

Another important factor to successful corporate park design is finding parcels of land large enough to accommodate a large-scale plan of development. Property owners interested in developing their land often find it is more profitable to group together a number of smaller adjacent parcels into one (1) significant

holding. When the market is right, this approach can attract quality, large-scale corporate park development and discourage the piecemeal commercial “stripping” of development along major highways.

Where practical and appropriate, the design of commercial uses can incorporate elements from nearby historic buildings, creating a common area theme that helps contribute to community continuity. Effective design also takes into consideration adjacent land character types.

A PLAN FOR ACTION

I. Goals

The vision of the Route 288 Corridor Plan is to effectively guide future development in a way that promotes maximum benefit to Chesterfield County's current and future citizens, while recognizing the importance of property rights, healthy neighborhoods, environmental preservation and the County's high quality of life. The goals listed below foster this vision and establish a framework for the Plan's more specific recommendations.

A. Basic Principles

1. Recognize the prime importance of the Route 288 Corridor to Chesterfield County's economic future.
2. Take advantage of the benefits to Chesterfield County that Route 288 will have as a primary component of the region's transportation system.
3. Chart a future for the area that takes into account both the interests of the current community and the long-term welfare of all Chesterfield citizens.

B. Orderly Growth

1. Guide each type of development to the most appropriate area by following the County's Comprehensive Plan.
2. Discourage development that may be detrimental to long-term economic and environmental goals.
3. Minimize the cost of public facilities by promoting orderly and efficient development.
4. Only approve development proposals supported by public utilities.

C. Transportation

1. Provide a safe, efficient and cost-effective transportation system.
2. Control development densities within the Corridor so that smooth flow of traffic is provided on Route 288 and on major arterial and collector streets.
3. Provide for the construction of additional major arterial and collector streets as development occurs to mitigate the increase in traffic generated by development in the Corridor.
4. Properly locate and limit the number of access points to major arterial and collector streets.
5. Encourage pedestrian activity at appropriate locations in the Corridor.

D. Economic Opportunities

1. Maximize the economic development potential of the Route 288 Corridor as a prime location for basic sector employment, such as corporate office and light industrial uses.
2. Take advantage of the potential for spin-off economic development from other major employment centers in the region, especially those opportunities for high-tech industry and corporate office centers.
3. Work to provide more basic sector jobs closer to the population centers in northern Chesterfield County.
4. Identify large parcels that are suitable for industrial development.
5. Protect sites identified for industrial use from encroaching residential and retail development.
6. Identify and market parcels appropriate for economic development.

E. Resource Protection

1. Maintain the environmental quality of the area.

2. Protect water quality in the Upper Swift Creek Reservoir watershed, as well as in the area's perennial and non-perennial streams.
3. Encourage development to accommodate and preserve existing landscape where possible.
4. Protect historic resources in the area by promoting historic designation of identified structures and encouraging development to preserve historic structures.

F. Housing

1. Promote housing development that will meet the needs of future residents and businesses.
2. Where residential development is appropriate, strive for a mix of housing options that will complement the County's economic development initiatives.

G. Community Character and Design

1. Enhance the aesthetic quality of the area through quality design.
2. Encourage public safety through the effective design of development.
3. Encourage development design that promotes community character.

II. Recommendations

The following recommendations are the specific actions required to carry out the Route 288 Corridor Plan. These recommendations, combined with the land use plan that follows, will help guide the future of the Route 288 Corridor area. However, these recommendations will require cooperation between businesses, industries, residents and government to make them successful.

A. Land Use

1. **Land Use Plan:** Follow the land use recommendations of the Route 288 Corridor Plan to guide future decision making.
2. **Aggregation:** Through the zoning process, encourage owners interested in selling smaller land parcels in the Route 288 Corridor to join with adjacent property owners to aggregate land holdings large enough to accommodate a large-scale plan of development.
3. **Incompatible Uses:** Residential land uses should be discouraged in areas designated for non-residential areas in this Plan (areas designated for light industrial, office or commercial land uses) and vice versa, except where those uses are permitted by right.

B. Quality Design

1. **Large-Scale Development:** Encourage large-scale development projects of quality design which follow an office park-planned development approach (i.e., Arboretum, Moorefield, Boulders). These projects should also include an internal road network and controlled access.
2. **Design Standards:** Adopt amendments to the County's Design Standards Manual creating an overlay district for the Route 288 Corridor Plan area in all Regional Employment Center land use areas (see Map F) which would:
 - a) Increase landscaping required in front and corner setbacks for new development.
 - b) Require curb and gutter in all new developments.
 - c) Allow building heights of up to 150 feet.
 - d) Require new development adjacent to Route 288 to orient buildings so that the views of buildings from Route 288 will not be of loading docks, storage areas, etc.
 - e) Require developers to design attractive wet ponds for Best Management Practices (BMPs) that can be incorporated into developments as amenities.

- f) Enhance requirements for quality architecture.
- g) Require developments in I-2 Districts to pave their parking lots.
- h) Limit outdoor storage uses in I-2 Districts.
- i) Encourage pedestrian access in and around projects and a plan for linking pedestrian access to adjacent properties.

3. **Safety:** All development proposals should be designed to accommodate public safety needs.

4. **Urban Design:** The area closest to the Route 288/60 interchange may be appropriate for an urban or neo-traditional scaled and designed development. This concept may include reduced setbacks, formal landscaping, pedestrian access, superior architectural design and other features that are representative of this urban or neo-traditional design. A quality development of this type could be submitted and processed through the County's CUPD (Conditional Use Planned Development) process.

C. Economic Growth

1. **Proactive Zoning:** Because of the economic development opportunities available in this area, not present in other areas of the County, there may be situations where the County would like to encourage development. Additional study of proactive rezoning should be conducted following the adoption of The Route 288 Corridor Plan.

2. **Opportunity:** The Department of Economic Development should continue to identify prime sites in the area and pursue proven developers to build quality office and business parks.

3. **Jobs:** The Department of Economic Development should determine which types of economic activities (i.e., corporate and divisional headquarters, research and development, light manufacturing, distribution, back office operations, office/office showroom, etc.) will create the best job opportunities (payroll) for County citizens and generate significant tax revenues to Chesterfield County and pursue those uses for the Route 288 planning area.

4. **Marketing:** The Economic Development Department should develop and implement a marketing plan to capitalize on location advantages of the Route 288 Corridor, such as its proximity to workers, John Tyler Community College, major roads and Motorola's West Creek Campus.

D. Public Facilities

1. **Utilities Study:** A detailed utilities study should be undertaken to address possible demand/capacity issues, if uses are pursued that are more intense than those reflected by the Plan.

2. **Water/Wastewater Ordinance:** The County should adopt an Ordinance for this area requiring mandatory hook-up to County water and wastewater at the time of development.

3. **Policing Office:** As the surrounding communities grow and develop, an appropriate location for a policing office should be identified and permitted in a central, strategic location.

4. **Fire/Rescue Facility:** A fire/rescue station is planned within the area of Midlothian Turnpike and Route 288 to meet the existing and future demands for service and response time standards.

E. Transportation

1. **Thoroughfare Plan:** Amend the County's Thoroughfare Plan in the Route 288 Corridor, as shown on Map F, and use the amended Plan as the guide for transportation recommendations on development proposals.

2. **Mitigating Road Improvements:** Development proposals within the Corridor should provide mitigating road improvements, to include right-of-way dedication, construction of turn lanes, installation of traffic signalization and shoulder improvements.
3. **Access to Arterial and Collector Roads:** Through the zoning, site plan review and subdivision review processes, control access to major arterial and collector roads through shared access, adequate access separation and traffic control devices to maintain orderly and efficient traffic flow.
4. **Traffic Noise Abatement:** Provide setbacks for future sound-sensitive land uses, such as residential development along Route 288, to reduce traffic noise impacts.
5. **Pedestrian Access:** Develop a network of sidewalks, in accordance with the County's Sidewalk Policy, to provide for pedestrian travel.
6. **Route 288 Funding:** The funds that have been allocated for the Route 288 project will provide a four (4) lane facility between Powhite Parkway and Midlothian Turnpike and a two (2) lane facility north of Midlothian Turnpike. The County should aggressively pursue completion of Route 288.

F. Environmental Resources

1. **Vegetation:** Through the zoning process, encourage developers to disturb as little landscape and plant life as possible around the entrances and fringes of the project area and bodies of water to preserve the area's environmental character and the natural erosion and pollutant controls provided by the undisturbed vegetation.
2. **Upper Swift Creek Ordinance:** Review and consider the following in conjunction with the Watershed Management Plan and Maintenance Program for the Swift Creek Reservoir:
 - a) Restrict reductions in the pre-established Resource Protection Area (RPA) boundaries.
 - b) Prohibit tree removal, clearing or filling in the 100 year floodplain adjacent to perennial and intermittent streams.
 - c) Limit clearing and construction on slopes greater than 20 percent within, or contiguous to, Resource Protection Areas (RPAs).
3. **Regional BMPs:** If development does take place on a site that is expected to be served by a regional BMP facility, staff will assist the developer in identifying a regional site and will attempt to facilitate discussions among the developer and other landowners for a regional facility. However, staff will not require a regional facility unless the developer and other landowners agree on a voluntary regional approach. If such an agreement is not reached, the developer will be required to provide a BMP facility for his own site.
4. **New Development Prior to the Regional BMP Master Plan:** New development that takes place prior to the adoption of the Regional BMP Master Plan (Watershed Master Plan and Maintenance Program) currently being developed for the Swift Creek Reservoir Watershed must be encouraged to construct regional BMP facilities where there are technically feasible sites and the County should take reasonable steps and actions to protect and promote those sites. When the BMP Master Plan is adopted, new development must comply with the BMP Master Plan. The County should adopt the BMP Master Plan as soon as possible.
5. **Future Water Quality Technologies:** For rezoning requests in the Upper Swift Creek watershed portion of The Route 288 Corridor Plan area, developers should be encouraged, through the use of voluntary proffers, to conform to possible future water quality protection measures and/or technologies.

G. Housing and Community

1. **Housing Types:** Evaluate whether revisions to the County's residential zoning ordinances would encourage a mix of housing options for new workers, complementing the County's economic development initiatives.

H. Historic Resources

1. **Preserve Structures:** Bethel Baptist Church and Hallsborough Tavern, historic structures, should be preserved. Any adjacent development is encouraged to be architecturally compatible.
2. **Historic Area:** Create an area around Bethel Baptist Church and Hallsborough Tavern, as shown on Map F. Any development in this area is encouraged to incorporate the design characteristics of these historic structures to preserve the historic character of the area. The goal of this area is to maintain the sense of place at this intersection created by Hallsborough Tavern and Bethel Baptist Church:
 - a) On the north side of Midlothian Turnpike, development is encouraged to incorporate design features from the existing historic properties, including building scale, architectural design and texture. Further, development in this area is encouraged to incorporate pedestrian access and sidewalks.
 - b) On the south side of Midlothian Turnpike, properties adjacent to Midlothian Turnpike are encouraged to be similar in scale and architecture to Hallsborough Tavern and Chapel Hill. Development in the remainder of this portion of the historic district may be larger in scale but not overwhelming to the smaller-scale development.
3. **Historic Designations:** The Chesterfield County Preservation Committee should work with the property owners of Bethel Baptist Church and Chapel Hill to have these properties designated as County historic landmarks.
4. **Historic and Cultural Significance:** The Chesterfield County Preservation Committee should recognize Mount Sinai Baptist Church and Cemetery for their historic and cultural significance to the County, including a plaque at the site explaining the story and significance of the church and initiate steps to designate it as a historic landmark.

III. The Land Use Plan

The land use plan for the Route 288 Corridor is a guide for future change. The land use plan illustrates the recommended future development pattern for the Route 288 Corridor area (see Map F). This map will be a useful guide for the future land use and rezoning decisions. Land use categories, their definitions and key features of recommended uses are presented in Chart 3.

Successfully implemented, this land use plan will:

- Target key land in the northwestern part of Chesterfield County for office, light industrial and corporate park uses; in turn, strengthening the County's tax base and providing new employment opportunities.
- Promote a land use development pattern that takes best advantage of Route 288's links to the region's transportation system while, at the same time, providing effective transition between new uses and adjacent communities.
- In the portion of The Route 288 Corridor Plan area that drains to the Swift Creek Reservoir, maintain the current in-lake phosphorous limit and the reduced phosphorous standard for new residential development, as outlined in the County's 1997 Watershed Management Plan.

The land use plan offers guidance to County staff, elected officials and citizens as new development proposals are brought forward and evaluated. For example, if a landowner is interested in developing his vacant property, which is currently zoned for Agricultural (A) uses, the land use plan will be consulted by staff as they determine their recommendation for the rezoning. If the rezoning request does not comply with the land use designation on the land use plan, staff is not likely to recommend approval of the request.

Generally, the land use plan does not recommend changes to the zoning of any land. However, as outlined in the land use recommendations, if the Board of Supervisors chooses to rezone property in this area, this land use plan will be used as a guide.

Chart 3 LAND USE CATEGORIES

The categories shown on Map F are described below. Because land use plans are a general guide for recommended future growth, all uses that could possibly be developed cannot be listed here. More detailed information on potential uses can be found in the corresponding categories (i.e., O-2) of the Chesterfield County Zoning Ordinance.

- **Residential** (One (1) dwelling or less per acre): Residences, and under certain circumstances, places of worship, schools, parks and other similar public facilities.
- **Residential** (One (1) to two (2) dwellings per acre): Residences, and under certain circumstances, places of worship, public schools, parks and other similar public facilities. Projects that drain away from Swift Creek Reservoir may be appropriate for densities of up to 2.5 dwellings per acre.
- **Office/Residential Mixed Use:** Professional and administrative offices (O-2), residential developments of varying densities, and light industry (I-1). Under certain circumstances, supporting small-scale, retail uses may be incorporated into a larger development.
- **Convenience Commercial** (not shown on Plan): Limited retail, service and office uses (C-1 and O-1) mainly serving nearby neighborhoods or rural locations, generally located at the intersection of through streets (the intersection of two (2) collectors or a collector and an arterial as designated in the Thoroughfare Plan), provided adequate spacing is provided. In developing areas, they should be planned in conjunction with new residential projects.
- **Neighborhood Mixed Use:** Neighborhood-oriented commercial uses (C-2), including small shopping centers.
- **Light Industrial/Flex:** Offices, warehouses and light industrial uses (I-1 and some I-2 uses), including research and development uses as well as flex space. Under certain circumstances, supporting small-scale, retail uses may be incorporated into a larger development.
- **Regional Employment Center:** Office, research and development uses, warehouses and light industrial uses (I-1). Moderate industrial uses may be appropriate in some locations if appropriate access, buffering and land use transitions are provided. Under certain circumstances, supporting small-scale, retail uses may be incorporated into a larger development.

Note 1: The existing single family residential uses should be maintained and protected until appropriate redevelopment occurs in compliance with the recommended regional employment center land use designation. Zoning standards and proffers shall be used to protect the residential character until the property owners develop this area for the planned land uses. See Appendix B for the properties covered by this note.

Note 2: A regional scale high fashion mall or lifestyle/entertainment center is appropriate at this quadrant if integrated with the Regional Employment Center uses, subject to the following guidelines:

- For a high fashion mall, if there are two or less anchor stores, at least one of the proposed anchors should be a high end, high fashion company. Examples of such companies include, but are not limited to Nordstroms, Bloomingdale's, Neiman Marcus, Lord & Taylor, and Saks Fifth Avenue. If there are more than two anchors, an appropriate number should be high end, high fashion companies, so as to maintain the integrity of a high fashion mall.
- For a lifestyle/entertainment center, the center may or may not include anchor stores, and should create a format different from a typical regional mall by including well designed plazas and common areas. Examples such lifestyle/entertainment centers include, but are not limited to: The Avenues East Cobb, in Atlanta, Georgia; the Summit, in Birmingham, Alabama; Saddlecreek, in Memphis, Tennessee; One Pacific, in Omaha, Nebraska, Phillips Place, in Charlotte, North Carolina; and the Shops at Sunset Place, in Miami, Florida.
- Related uses, such as movie theaters, theme destination entertainment retailers, other entertainment uses, upscale restaurants, neighborhood retail, neighborhood services, offices, hotels, residential units, and natural amenities could also be included in this quadrant provided they are integrated with the high fashion mall or lifestyle/entertainment center. Design standards should insure the architectural compatibility of such uses.
- The high fashion mall or lifestyle/entertainment center should be integrated with the Regional Employment Center, complementing it, rather than overwhelming it.
- Route 288 should be completed across the James River before a regional scale high fashion mall or lifestyle/entertainment center is opened.

Neighborhood retail uses are also appropriate in this quadrant of the Regional Employment Center provided they are integrated with other designated uses and avoid typical "strip commercial" characteristics.

(Map F)

Route 288 Corridor Plan

LEGEND - See descriptions on page 20

- Residential (One dwelling or less per acre)
- Residential (1 to 2 dwellings per acre)

Note: Projects that drain away from Swift Creek Reservoir may be appropriate for densities of up to 2.5 dwellings per acre.

- Office/Residential Mixed Use
- Neighborhood Mixed Use
- Light Industrial/Flex
- Regional Employment Center

Historic Area

RIGHT OF WAY CLASSIFICATION

- | Existing Road | Proposed Road | |
|--------------------------|--------------------------|--|
| Collector 60' | Collector 60' | |
| Collector 70' | Collector 70' | |
| Major Arterial 90' | Major Arterial 90' | |
| Major Arterial 120'-200' | Major Arterial 120'-200' | |
| Limited Access 200' | Limited Access 200' | |

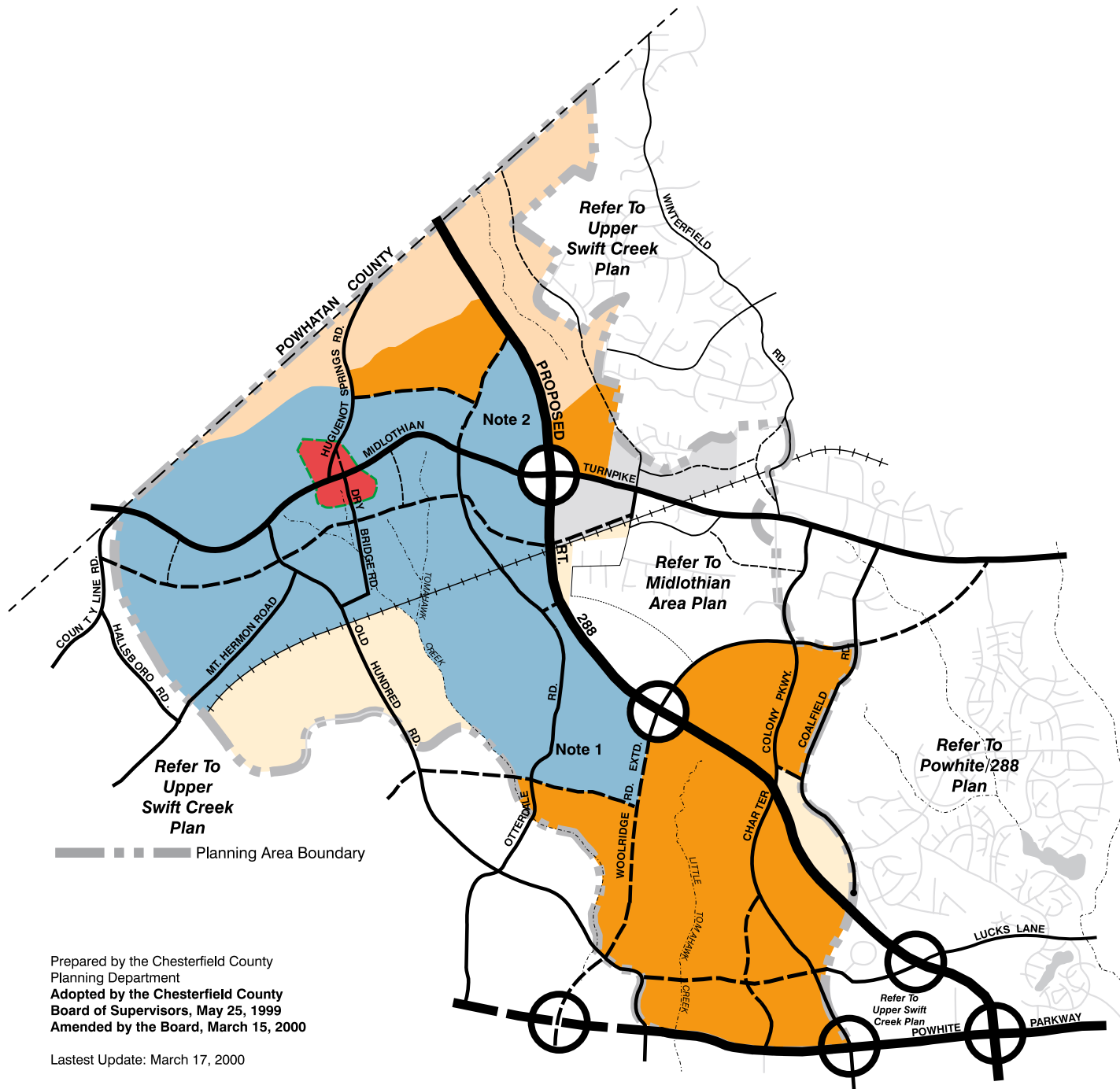
Limited Access interchange

Note: The exact right of way widths and proposed road alignments should be verified with the County Transportation Department.



0 4800 9600
Feet

All boundaries are generalized at this scale. Please verify boundaries and scale distances with the Planning Department.



Prepared by the Chesterfield County
Planning Department
Adopted by the Chesterfield County
Board of Supervisors, May 25, 1999
Amended by the Board, March 15, 2000

Lastest Update: March 17, 2000

Appendix A

TECHNICAL MEMORANDUM

Kramer Model Update for I-288 Corridor Changes

PREPARED FOR: Joan Salvati/Chesterfield County

PREPARED BY: Andrea Ryon/CH2MHILL

Fernando Pasquel/CH2MHILL

DATE: March 3, 1998

In 1994, Mary Kramer, a member of the Chesterfield county Watershed Management Committee, developed a spreadsheet model (Kramer model) to evaluate the impacts of development within the Upper Swift Creek watershed on water quality in Swift Creek Reservoir.

The purpose of Mrs. Kramer's modeling effort was to evaluate if a phosphorus export goal of 0.22 lb/ac/yr from new residential land uses and 0.45 lb/acre/yr from new non-residential land uses was sufficient to prevent in-lake phosphorus concentrations from exceeding 0.05 mg/L. A level considered suitable to controlling eutrophication in the reservoir.

For existing land uses, watershed pollutant loading factors from two different sources were used: Swift Creek Reservoir Watershed study (CDM, 1989) and CBLAD's factors listed in the Chesterfield County Calculation Procedures Manual. The empirical Reckhow relationship for southeastern U.S. reservoirs was used to estimate the median summer in-lake total phosphorus concentration.

Mrs. Kramer analyzed six different scenarios:

- existing land use

- zoned land use

- proposed land use (Zoning plus additional proposed projects)

- proposed land use with remainder of County built out with 5 acre residential lots

- proposed land use with remainder of County built out with 1 acre residential lots

- proposed land use with remainder of County built out with 0.5 acre residential lots

Since the Kramer model was developed, zoning changes within the I-288 corridor have been proposed. Because these changes include shifts from residential uses to non-residential uses, total phosphorus loads calculated in the Kramer model would be expected to increase with the new land uses.

To evaluate these changes, the model was re-run with the proposed I-288 corridor land use changes. A meeting was held with Planning Department, Department of Environmental Engineering, Economic Development Department and CH2MHILL staff to identify the differences between the land uses in the existing Kramer model and the proposed land uses in the I-288 corridor. The modifications to the model required to reflect the new I-288 corridor land uses are summarized in Table 1.

TABLE 1 - CHANGES IN LAND USE BETWEEN KRAMER MODEL AND PROPOSED I-288 CORRIDOR DEVELOPMENT

Subtract	Add
300 acre Watkins commercial property	1408 acres moderate industrial land use
300 acre commercial development along Route 60	420 acres light industrial land use
1682 acres of 2.2 du/ac residential area	454 mixed use land use
Equivalent Changes for Residential and Non-residential Land Uses	
Subtract	Add
600 acres non-residential and 1682 acres of residential	2282 acres of nonresidential

These modifications were made to the model in order to evaluate the impact on phosphorus loads. The change was applied to the following 4 cases:

- proposed land use (zoning plus additional proposed projects)
- proposed land use with remainder of County built out with 5 acre residential lots
- proposed land use with remainder of County built out with 1 acre residential lots
- proposed land use with remainder of County built out with 0.5 acre residential lots

The total phosphorus loads and the resulting phosphorus concentration in the reservoir are shown in Table 2 for the original Kramer model and for the modified model. In addition, the % differences between the original calculations and the modified calculations are shown.

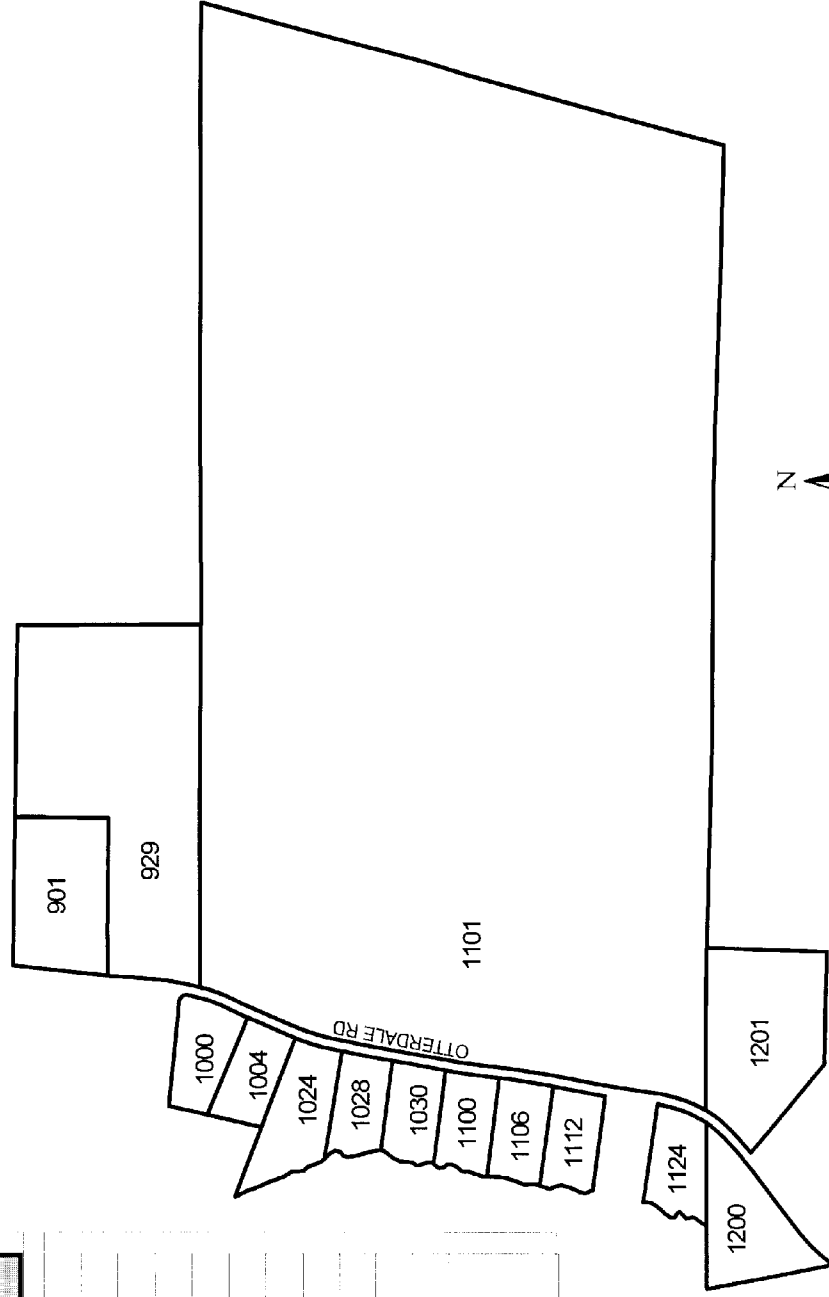
TABLE 2 - MODEL RESULTS FOR ORIGINAL AND MODIFIED MODEL

	Proposed	Proposed with 5-acre build-out	Proposed with 1-acre build-out	Proposed with 0.5-acre build-out
Loading factors based on 1989 Swift Creek Reservoir Watershed Study				
Watershed Phosphorus load (lb/yr)				
Original model	10,525	16,801	16,221	16,221
Modified model	10,912	17,188	16,608	16,608
% change	3.7	2.3	2.4	2.4
Phosphorus concentration in reservoir (mg/L)				
Original model	0.039	0.056	0.051	0.049
Modified model	0.040	0.056	0.052	0.050
% change	2.3	1.4	1.5	1.5
Loading Factors based on CBLAD				
Watershed Phosphorus Load (lb/yr)				
Original model	8,992	14,254	14,254	14,254
Modified model	9,379	14,641	14,641	14,641
% change	4.3	2.7	2.7	2.7
Phosphorus concentration in reservoir (mg/L)				
Original model	0.039	0.055	0.050	0.049
Modified model	0.040	0.055	0.051	0.050
% change	2.6	1.6	1.7	3.1

For the proposed zoning condition, zoning modifications in the I-288 corridor increase the annual phosphorus load to the reservoir approximately 4%. This change increases the calculated phosphorus concentration in the reservoir from 0.039 mg/L to 0.040 mg/L, an increase of 2.3 - 2.6 percent, which is approximately 80% of the 0.05 mg/L goal.

For the three build-out conditions, the calculated in-lake phosphorus concentrations were near or above 0.05 mg/L for the original Kramer model. The modifications increase these estimated concentrations between 1 to 3%.

Address
901 OTTERDALE RD
929 OTTERDALE RD
1000 OTTERDALE RD
1004 OTTERDALE RD
1201 OTTERDALE RD
1101 OTTERDALE RD
1024 OTTERDALE RD
1028 OTTERDALE RD
1030 OTTERDALE RD
1100 OTTERDALE RD
1106 OTTERDALE RD
1112 OTTERDALE RD
1124 OTTERDALE RD
1200 OTTERDALE RD



Prepared By Chesterfield County Planning Dept.
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